B1

2. (Amended) The method of claim 24, wherein the step of determining further comprises the step of measuring the velocity of the first ink droplet discharged from the printhead relative to the velocity of the second ink droplet discharged from the printhead.

B2

5. (Amended) The method of claim 24, further comprising the steps of:

generating an ink droplet velocity profile for the printhead from the determined differences between the parameters of the first and second ink droplets.

B3

9. (Amended) The method of claim 24, wherein the step of regulating the printing operation comprises the step of determining an air gap distance between an imaging medium and the printhead, and based on the air gap distance, adjusting the compensation values to regulate the printing operation.

B4

10. (Twice Amended) The method of claim 24, further comprising the step of:

adjusting at least one of

(a) a tilt position of the printhead;

(b) a direction of one of said first and second ink droplets; and

(c) a speed of one of said first and second ink droplets; based on said adjusted compensation values.

B5

14. (Twice Amended) In an image forming system, a method of forming an image with a printhead, the method comprising the steps of:

discharging a first set of ink droplets and a second set of ink droplets from the printhead onto a print medium to form an image;

determining differences in distance between the first set of ink droplets and the second set of ink droplets once deposited on the print medium;

updating, by a user, compensation values based on the determined differences between the first set of ink droplets and the second set of ink droplets; and

controlling a subsequent discharge of the ink droplets from the printhead based on the updated compensation values.

17. (Twice Amended) An image forming system; comprising:

a printhead;

a processor for controlling the printhead; and

a printhead facility coupled to the processor for controlling the printhead based on differences between a parameter of a first ink droplet and a parameter of second ink droplet measured after formation of an image on an imaging medium, the printhead facility including,

a data file including a plurality of compensation values used to control operation of the printhead, and

a compensation adjustment mechanism configured to permit a user to update the compensation values stored in the data file.

B6

Please add new claims 24-34 as follows:

24. (New) A printhead signature correction method for a high resolution printer system, the method comprising:

(a) generating, at the time of manufacture of the printhead, a data file of ink droplet compensation values used to control operation of the printhead;

(b) discharging ink droplets in a predetermined pattern from the high resolution printer system to form a test image on an image medium;

(c) determining differences between at least one parameter of a first ink droplet and at least one parameter of a second ink droplet of the image, the at least one parameter of the first and second ink droplets being at least one of droplet distance from a target point, parallelism between the first ink droplet and the second ink droplet, or a dimensional analysis of the first and second ink droplets on the image medium;

(d) deriving updated ink droplet compensation values for the ink droplets, based on at least one of the parameters;

(e) adjusting, by a user, the ink droplet compensation values stored in the data file;

(f) generating an updated data file including the adjusted ink droplet compensation values; and

B7 cont

(g) regulating the printing operation by use of the compensation values stored in the updated data file.

Sub B7 C cont

25. (New) The method according to claim 24 further including,

grouping the ink ejectors of the printhead into sets of grouped ink ejectors, the groupings determined by location in the printhead or groupings based on existing ink droplet compensation values.

26. (New) The method according to claim 25 further including,

presenting the user with the ink ejectors as a plurality of individual groupings.

27. (New) The method according to claim 26, wherein the adjusting step includes adjusting all the ink ejectors in a specific grouping by a same value.

28. (New) The method according to claim 25, wherein the step of adjusting the compensation values in the data file reduces drop placement errors to plus or minus four microns in a high addressability direction.

29. (New) The method according to claim 24, wherein the compensation values are used for a printhead having a nozzle or ejector density of 600 nozzles or ejectors per inch.

30. (New) The method according to claim 24 wherein printhead resolution is equal to or greater than 1200 pixels per inch.

31. (New) The method according to claim 25, wherein the determining step is accomplished through the use of human vision.

32. (New) The system of claim 17 further including,

a group mechanism which forms groups of ink ejectors of the printhead into sets of grouped ink ejectors, the groupings determined by location in the printhead or determined based on existing ink droplet compensation values.

33. (New) The system of claim 17, wherein the compensation adjustment mechanism is further configured to permit a user at an operation site to make the compensation value adjustments.

B7 Cont'd

34. (New) The system of claim 32, wherein compensation adjustment mechanism adjusts all ink ejectors in a group to a same compensation value.